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<223> Choi3 (PCR Primer)

<400> 1
ccgccstgsa tcaagtac 18

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<212> DNA
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<223> Choi4 (PCR Primer)

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<212> DNA
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<223> HJ-PHB-N (PCR Primer)

<400> 3
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<211> 27
<212> DNA
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27

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20

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21

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19

<210> 8
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<220>
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47

<210> 9
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 <212> DNA
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<220>
 <223> BA-C (PCR Primer)

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<400> 9
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<210> 10
<211> 28
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<213> Artificial Sequence

<220>
<223> SD-phbC-N (PCR Primer)

<400> 10
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<210> 11
<211> 39
<212> DNA
<213> Artificial Sequence

<220>
<223> phbC-C (PCR Primer)

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<212> DNA
<213> Pseudomonas sp. HJ-2

<220>
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<223> n=A, C, G or T

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atcaacatct cctcaatcaa tggccagcga ggccagttcg ggcagaccaa ctactccgcg 480
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<213> Pseudomonas sp. HJ-2

<220>
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<222> (207)
<223> n=A, C, G or T

<220>
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<222> (209)
<223> n=A, C, G or T

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gccatccgct gtggcgatgc cgagggtggtg attgccggtg gcatggagaa catgagcctg 360
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gacagcatga tcgtcgacgg cctgtgggac gccttcaacg actaccacat ggggatcact 480
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gcctcgcagc agaaagccgt ggccgccatc gagaccggtc gcttccgcga cgagatcgtc 600
ccggtgagca ttccgcagcg caagggcgag gcgctgagct tcgacaccga cgaacagcca 660
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 <211> 1701
 <212> DNA
 <213> Pseudomonas sp. HJ-2

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 caaagccagt ggttcgacgt acctgtcgag gcgttggagc aactgcaggc ggactaccaa 180
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 cgtcgcttcg ccagtggcaa ctggagcgaa ccgctgttcg gttccctggc tgccttctac 300
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1701

<210> 15
 <211> 3933
 <212> DNA
 <213> Pseudomonas sp. HJ-2

<220>
 <221> variation
 <222> (608)
 <223> n=A, C, G or T

<220>
 <221> variation
 <222> (1134)
 <223> n=A, C, G or T

<220>
 <221> variation
 <222> (1136)
 <223> n=A, C, G or T

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 tggttaatgg gtactgcbag caatgcggca cgtatagctc tggtcaccgg tggatatggg 180
 ggtatcggta cggcgatcag ccagcgccg catcgggatg gcttcaccgt ggtggtggg 240
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tcctggcgca	acttcactca	ggaacaggcc	gacatcacct	gggagcagat	catccaggac	3060

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<210> 16
 <211> 251
 <212> PRT
 <213> Pseudomonas sp. HJ-2

<220>
 <221> variation
 <222> (161)
 <223> Xaa = Asp, Ala, Gly or Val

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 Met Gly Gly Ile Gly Thr Ala Ile Ser Gln Arg Leu His Arg Asp Gly
 20 25 30
 Phe Thr Val Val Val Gly Cys Asn Pro Tyr Ser Ser Arg Lys Ala Ser
 35 40 45
 Trp Ile Ala Thr Gln Leu Glu Ala Gly Phe His Phe His Cys Ile Asp
 50 55 60
 Cys Asp Ile Thr Asp Trp Asp Ser Thr Arg Gln Ala Phe Asp Met Val
 65 70 75 80
 His Glu Thr Val Gly Pro Ile Asp Val Leu Val Asn Asn Ala Gly Ile
 85 90 95
 Thr Arg Asp Gly Thr Phe Arg Lys Met Ser Pro Glu Asn Trp Lys Ala
 100 105 110

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Val Ile Asp Thr Asn Leu Thr Gly Leu Phe Asn Thr Thr Lys Gln Val
 115 120 125
 Ile Glu Gly Met Leu Ala Lys Gly Trp Gly Arg Val Ile Asn Ile Ser
 130 135 140
 Ser Ile Asn Gly Gln Arg Gly Gln Phe Gly Gln Thr Asn Tyr Ser Ala
 145 150 155 160
 Xaa Lys Ala Gly Ile His Gly Phe Ser Met Ala Leu Ala Arg Glu Val
 165 170 175
 Ser Gly Lys Gly Val Thr Val Asn Thr Val Ser Pro Gly Tyr Ile Lys
 180 185 190
 Thr Asp Met Thr Ala Ala Ile Arg Pro Asp Ile Leu Glu Asp Met Ile
 195 200 205
 Thr Gly Ile Pro Val Gly Arg Leu Gly Gln Pro Glu Glu Ile Ala Ser
 210 215 220
 Ile Val Ala Trp Leu Ala Ser Asp Gln Ser Ala Tyr Ala Thr Gly Ala
 225 230 235 240
 Asp Phe Ser Val Asn Gly Gly Met Asn Met Gln
 245 250

<210> 17
 <211> 392
 <212> PRT
 <213> Pseudomonas sp. HJ-2

<220>
 <221> variation
 <222> (69)
 <223> Xaa = Glu or Asp

<220>
 <221> variation
 <222> (70)
 <223> Xaa = Gln, Pro, Arg or Leu

<400> 17
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 Phe Gln Gly Ser Leu Ala Gly Thr Pro Ala Val Glu Leu Gly Ala Thr
 20 25 30
 Val Ile Arg Arg Leu Leu Glu Gln Thr Ala Leu Asp Ser Ser Gln Val
 35 40 45
 Asp Glu Val Ile Leu Gly His Val Leu Thr Ala Gly Ala Gly Arg Ile
 50 55 60
 Pro Leu Ala Arg Xaa Xaa Val Ile Ala Gly Leu Pro His Ala Val Pro
 65 70 75 80
 Ala Met Thr Leu Asn Lys Val Cys Gly Ser Gly Leu Lys Ala Leu His
 85 90 95

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Leu Gly Ala Gln Ala Ile Arg Cys Gly Asp Ala Glu Val Val Ile Ala
100 105 110
Gly Gly Met Glu Asn Met Ser Leu Ser Ser Tyr Val Leu Pro Lys Ala
115 120 125
Arg Thr Gly Leu Arg Met Gly His Ala Gln Leu Val Asp Ser Met Ile
130 135 140
Val Asp Gly Leu Trp Asp Ala Phe Asn Asp Tyr His Met Gly Ile Thr
145 150 155 160
Ala Glu Asn Leu Val Asp Lys Tyr Gly Ile Ser Arg Glu Ala Gln Asp
165 170 175
Glu Phe Ala Ala Ala Ser Gln Gln Lys Ala Val Ala Ala Ile Glu Thr
180 185 190
Gly Arg Phe Arg Asp Glu Ile Val Pro Val Ser Ile Pro Gln Arg Lys
195 200 205
Gly Glu Ala Leu Ser Phe Asp Thr Asp Glu Gln Pro Arg Ala Gly Thr
210 215 220
Thr Ala Glu Ser Leu Gly Lys Leu Lys Pro Ala Phe Lys Asn Asp Gly
225 230 235 240
Ser Val Thr Ala Gly Asn Ala Ser Ser Leu Asn Asp Gly Ala Ala Ala
245 250 255
Val Leu Leu Met Ser Ala Ala Lys Ala Ala Ala Leu Gly Leu Pro Val
260 265 270
Leu Ala Lys Ile Ala Ala Tyr Ala Asn Ala Gly Val Asp Pro Ala Ile
275 280 285
Met Gly Ile Gly Pro Val Ser Ala Thr Arg Ser Cys Leu Glu Lys Ala
290 295 300
Gly Trp Ser Leu Ala Glu Leu Asp Leu Ile Glu Ala Asn Glu Ala Phe
305 310 315 320
Ala Ala Gln Ala Leu Ala Val Gly Gln Glu Leu Gly Trp Asp Ala Gly
325 330 335
Arg Val Asn Val Asn Gly Gly Ala Ile Ala Leu Gly His Pro Ile Gly
340 345 350
Ala Ser Gly Cys Arg Val Leu Val Ser Leu Leu His Glu Met Leu Arg
355 360 365
Arg Asp Ala Lys Lys Gly Leu Ala Thr Leu Cys Ile Gly Gly Gly Gln
370 375 380
Gly Val Ala Leu Ala Ile Glu Arg
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<210> 18
<211> 566
<212> PRT
<213> Pseudomonas sp. HJ-2

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      20      25      30
Asn Thr Trp Phe Ser Gly His Asp Gln Ser Gln Trp Phe Asp Val Pro
      35      40      45
Val Glu Ala Leu Glu Gln Leu Gln Ala Asp Tyr Gln Gln Gln Trp Ala
      50      55      60
Glu Leu Gly Gln Gln Leu Leu Ser Cys Gln Pro Phe Ala Phe Ser Asp
      65      70      75      80
Arg Arg Phe Ala Ser Gly Asn Trp Ser Glu Pro Leu Phe Gly Ser Leu
      85      90      95
Ala Ala Phe Tyr Leu Leu Asn Ser Gly Phe Leu Leu Lys Leu Leu Glu
      100      105      110
Leu Leu Pro Ile Asp Glu Gln Lys Pro Arg Gln Arg Leu Arg Tyr Leu
      115      120      125
Ile Glu Gln Ala Ile Ala Ala Ser Ala Pro Ser Asn Phe Leu Leu Ser
      130      135      140
Asn Pro Asp Ala Leu Gln Arg Leu Val Glu Thr Gln Gly Ala Ser Leu
      145      150      155      160
Leu Ser Gly Leu Leu His Leu Ala Ser Asp Leu Gln Ala Gly Lys Leu
      165      170      175
Arg Gln Cys Asp Leu Gly Asp Phe Glu Val Gly Val Asn Leu Ala Thr
      180      185      190
Thr Pro Gly Ala Val Val Leu Glu Thr Pro Leu Phe Gln Leu Ile Gln
      195      200      205
Tyr Ser Pro Leu Ser Glu Thr Gln Tyr Gln Arg Pro Ile Phe Met Val
      210      215      220
Pro Pro Trp Ile Asn Lys Tyr Tyr Ile Leu Asp Leu Gly Pro Glu Asn
      225      230      235      240
Ser Leu Ile Arg His Leu Leu Glu Arg Gly His Gln Val Phe Leu Met
      245      250      255
Ser Trp Arg Asn Phe Thr Gln Glu Gln Ala Asp Ile Thr Trp Glu Gln
      260      265      270
Ile Ile Gln Asp Gly Val Ile Ser Ala Leu Arg Thr Thr Arg Ala Ile
      275      280      285
Ser Gly Glu Arg His Leu Asn Cys Leu Gly Phe Cys Ile Gly Gly Thr
      290      295      300
Met Leu Ser Cys Ala Leu Ala Val Leu Ala Ala Arg Gly Asp Gln Asp
      305      310      315      320
Ile Ala Ser Leu Ser Leu Phe Ala Thr Phe Leu Asp Tyr Leu Asp Thr
      325      330      335

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Gly Pro Ile Ser Val Phe Val Asp Glu Gln Leu Val Ala Tyr Arg Glu
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 Arg Thr Ile Gly Gly His Gly Gly Lys Cys Gly Leu Phe Arg Gly Glu
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 Asp Met Gly Asn Thr Phe Ser Leu Leu Arg Pro Asn Glu Leu Trp Trp
 370 375 380
 Asn Tyr Asn Val Asp Lys Tyr Leu Lys Gly Gln Lys Pro Leu Ala Leu
 385 390 395 400
 Gly Leu Leu Phe Trp Asn Asn Asp Ser Thr Asn Leu Pro Gly Pro Leu
 405 410 415
 Tyr Cys Trp Tyr Leu Arg His Thr Tyr Leu Gln Asn Asp Leu Lys Ser
 420 425 430
 Gly Glu Leu Asp Leu Cys Gly Val Lys Leu Asp Leu Arg Ala Ile Asp
 435 440 445
 Ala Pro Ala Tyr Ile Leu Gly Thr His Asp Asp His Ile Val Pro Trp
 450 455 460
 Arg Ser Ala Tyr Ala Ser Thr Glu Leu Leu Gly Gly Pro Lys Arg Phe
 465 470 475 480
 Val Leu Gly Ala Ser Gly His Ile Ala Gly Val Ile Asn Pro Pro Asp
 485 490 495
 Arg Asn Lys Arg His Tyr Trp Val Asn Glu His Ile Ala Pro Val Ala
 500 505 510
 Asp Asp Trp Leu Gln Gly Ala Gln Gln His Ser Gly Ser Trp Trp Gly
 515 520 525
 Asp Trp Phe Ala Trp Leu Thr Gly Tyr Ala Gly Pro Arg Lys Pro Ala
 530 535 540
 Ile Thr Met Leu Gly Ser Ala Glu Tyr Pro Pro Leu Glu His Ala Pro
 545 550 555 560
 Gly Arg Tyr Val Lys Leu
 565